

Bremerton Gasworks Superfund Site
Stakeholders Scoping Meeting – June 30, 2014

Agenda

Meeting (2 – 4 pm)

1. Introductions, Meeting Objectives and Agenda Review
2. Superfund Process Overview and Project Schedule
3. Site History/Background
4. Initial Scoping Considerations
5. Investigation Approach
6. Open Discussion

Site Visit (4-5pm)

DRAFT SCOPING MEMORANDUM

Bremerton Gas Works Site

Prepared for: Cascade Natural Gas Corporation

Aspect Project No. 080239-003 • Anchor QEA Project No. 131014-01.01
August, 2014

Contents

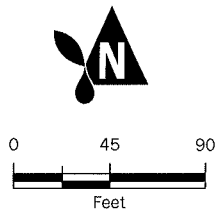
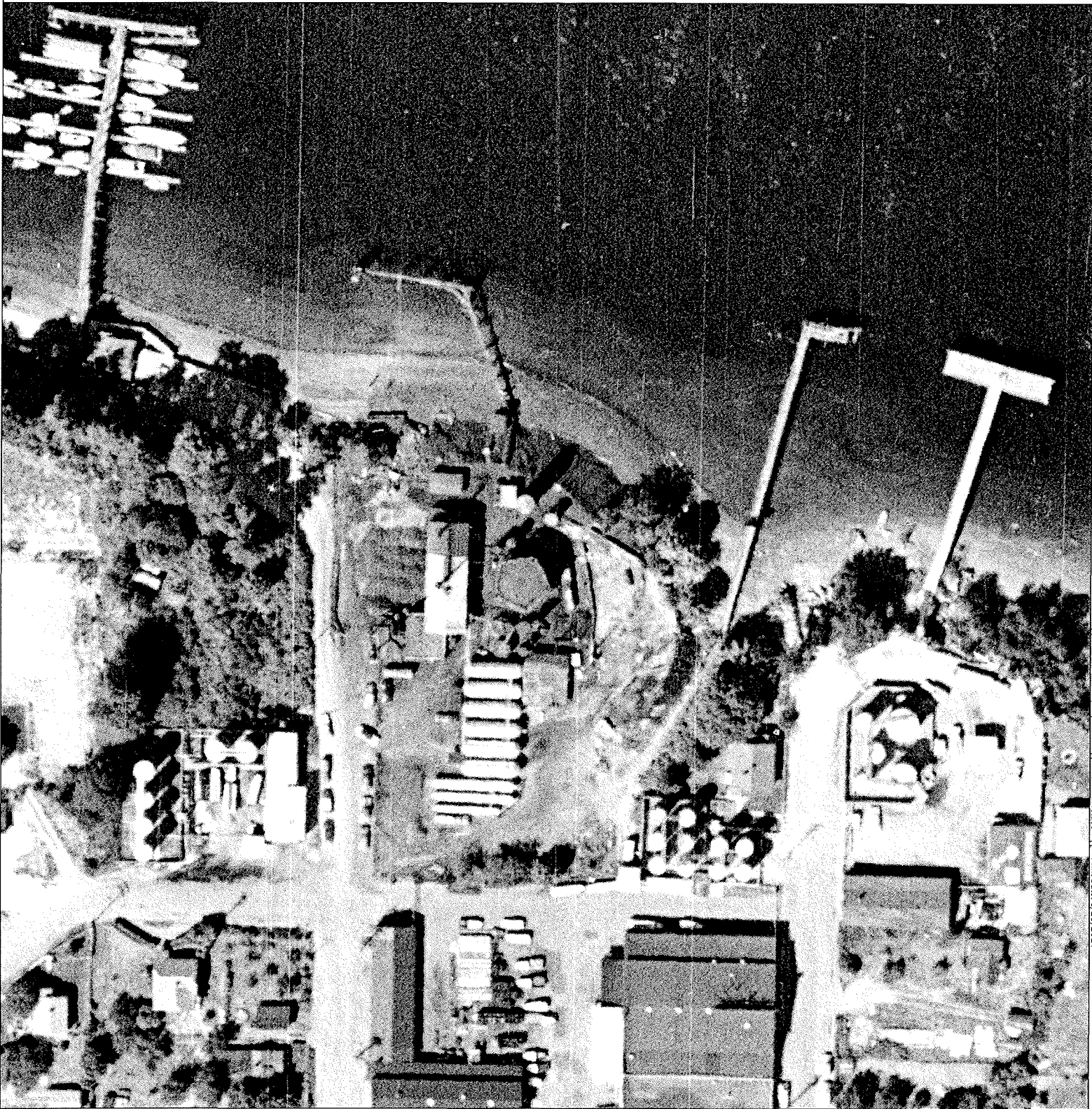
Acronyms	v
1 Introduction	6
1.1 Scoping Objectives	6
1.2 Document Organization	7
2 Site History and Description	7
2.1 Site Location and Description	8
2.2 Current and Historical Use and Operations	8
2.2.1 Gas Works Property	9
2.2.2 McConkey and Penn Plaza Properties	13
2.2.3 Sesko Property	14
2.2.4 Former ARCO Property	15
2.2.5 SC Fuels Property	15
2.2.6 Aquatic Parcels	16
2.2.7 Historical Operations Data Needs and Collection Strategy	16
3 Environmental Setting	17
3.1 Climate and Meteorology	17
3.2 Topography and Drainage	17
3.3 Geology and Hydrogeology	18
3.3.1 Regional Geologic Setting	18
3.3.2 Site Geology	18
3.3.3 Hydrogeology	19
3.3.4 Geology and Hydrogeology Data Needs and Collection Strategy	20
3.4 Human Populations and Land Use	20
3.4.1 Surrounding Land Use Characteristics	20
3.4.2 Drinking Water Use	20
3.4.3 Land Use Data Needs and Collection Strategy	21
3.5 Port Washington Narrows and Dyes Inlet	21
3.6 Natural Resources	21
3.7 Cultural Resources	21
4 Previous Investigations and Remedial Actions	22
4.1 Study Area Investigations	22
4.1.1 Ecology Field Inspection (1995)	23
4.1.2 Preliminary Uplands Assessment (2007)	23
4.1.3 Targeted Brownfield Assessment (2008)	23
4.1.4 Emergency Response Sampling and Analysis (2010)	24
4.2 Study Area Removal Actions	24
4.2.1 Time Critical Removal Action (2010)	24
4.2.2 Time Critical Removal Action (2013)	25
4.3 Other Upland Investigations and Remedial Actions	27

4.3.1	SC Fuels Property Investigations and Remedial Actions (1997 to 2007)	27
4.4	Other Sediment Investigations and Remedial Actions	27
5	Preliminary Conceptual Site Model	27
5.1	Potential Sources of Contamination	28
5.1.1	MGP Operations Sources	28
5.1.2	Other Operations Sources	29
5.1.3	Surface Fill	30
5.1.4	Stormwater Discharge	30
5.2	Contaminant Migration Pathways	30
5.3	Exposure Pathways and Receptors	31
6	Project Planning	31
6.1	ARARs	31
6.2	Preliminary Remediation Goals	32
6.3	Remedial Action Objectives	34
7	Existing Data and Data Usability	35
7.1	Data Quality Characterization	35
7.1.1	Minimum Data Acceptability Criteria	35
7.1.2	Data Usability	37
7.2	Existing Site-related Data	38
7.2.1	Soil Data	39
7.2.2	Groundwater Data	39
7.2.3	Sediment Data	39
7.2.4	Surface Water Data (none)	39
7.2.5	Tissue Data (none)	39
7.3	Existing Data from Other Cleanup Sites	39
7.4	Regional Data for Port Washington Narrows and Dyes Inlet	39
7.4.1	Sediment Quality Data	39
7.4.2	Tissue Quality Data	39
7.4.3	Regional Water Quality and Hydrologic Studies	39
8	RI/FS Approach	40
8.1	Chemicals of Potential Concern	40
8.2	Initial Study Area	40
8.2.1	Upland Initial Study Area	41
8.2.2	Sediment Initial Study Area	42
8.3	Risk Assessment Methodology	43
8.4	Potential Remedial Approaches	43
9	References	44

1946



1956



1946 and 1956 Aerials
Former Bremerton Gas Works
Bremerton, Washington
PRELIMINARY DRAFT

Draft Scoping Memorandum Preliminary Identification of Potential ARARs

List of Tables

- | | |
|---|------------------------------------|
| 1 | Potential ARARs, Action-Specific |
| 2 | Potential ARARs, Location-Specific |
| 3 | Potential ARARs, Chemical-Specific |

PRELIMINARY DRAFT

Table 1. Potential ARARs, Action-Specific

Bremerton Gas Works, Bremerton, WA

Remedial Activity	Act/Authority	Criteria/Issue	Citation	Brief Description	Applicability/Appropriateness
Soil Excavation and Upland Filling	Solid Waste Disposal Act	Management and disposal of Solid Waste	42 USC 6901-6917; 40 CFR 257-258	Establishes requirements for the management and disposal of solid wastes.	ARAR for remedial actions that result in upland disposal of excavated or dredged material.
	Resource Conservation and Recovery Act (RCRA); Washington Hazardous Waste Management Act and Dangerous Waste Regulations	Generation and Management (Transportation, Treatment, Storage and Disposal) of Hazardous Waste; Off-Site Land Disposal Considerations	42 USC 6921-22; 40 CFR Parts 260, 261 & 268; Chapter 70.105 RCW; Chapter 173-303 WAC (Chapter 173-307 WAC Pollution Prevention Plans is a TBC)	Defines solid wastes subject to regulation as hazardous wastes. Requires management of hazardous waste from “cradle to grave” unless exemption applies. MGP wastes are subject to certain exemptions (e.g. Bevill Amendment provisions)	ARAR for wastes and soils/ sediments excavated from the Site for off-site disposal, and a TBC for on-site stabilization or containment actions.
	Hazardous Materials Transportation Act	Transport of Hazardous Materials	49 USC 5101 et seq.; 49 CFR Parts 171-177	Establishes requirements for transport of hazardous materials.	ARAR for those hazardous materials (e.g., DNAPL) transported off site.
	Washington Hydraulics Code	Filling of Wetlands	Chapters 75.20 & 77.55 RCW; Chapter 220-110 WAC	Establishes requirements for performing work that would alter existing jurisdictional wetlands.	ARAR if remedial actions such as excavation or capping impact existing jurisdictional wetlands. Remedial actions must result in no net loss of aquatic habitat and function after sequential consideration of avoidance and mitigation, allowing for site-specific evaluations of existing wetland functions.

Table 1

Page 1 of 5

January 30, 2014

PRELIMINARY DRAFT

Table 1. Potential ARARs, Action-Specific

Bremerton Gas Works, Bremerton, WA

Remedial Activity	Act/Authority	Criteria/Issue	Citation	Brief Description	Applicability/Appropriateness
Soil Excavation and Upland Filling	City of Bremerton Shoreline Master Program (SMP) and Critical Areas Regulations	Shoreline of Statewide Significance; Fish and Wildlife Habitat Conservation Areas (FWHCA)	Chapter 90.58 RCW; Chapter 173-14 WAC; City of Bremerton Ordinance #5299 (effective December 4, 2013); Critical Area Regulations (BMC 20.14) are incorporated into the SMP by reference	Establishes replacement requirements for FWHCAs affected by remedial actions to ensure no net loss of existing ecological function; also establishes requirements for buffers and setbacks from shorelines.	ARAR if remedial actions such as excavation or capping impact within 200 feet of Ordinary High Water Mark or designated FWHCAs. Remedial actions must result in no net loss of aquatic habitat and function after sequential consideration of avoidance and mitigation, allowing for site-specific evaluations of existing shoreline habitat and FWHCAs. Washington's vested rights rule governs which SMP requirements apply in a given circumstance. Substantive requirements of the SMP that were in effect when redevelopment project applications were filed may be ARARs for future redevelopment actions at the Site.
Dredging, Capping, and/or Discharge to Puget Sound	Clean Water Act	Federal Ambient Water Quality Criteria	33 USC 1311 -1317; 40 CFR Part 131	See Table 4-1. Regulates activities which may result in discharges into navigable waters.	ARAR for control of short-term impacts to surface water from implementation of remedial actions that include dredging, capping, and discharge of treated water into Puget Sound. Incorporates the substantive provisions of relevant and appropriate Joint Aquatic Resources Permit Application (JARPA), Nationwide Permit, and stormwater regulation requirements.

Table 1

Page 2 of 5

January 30, 2014

PRELIMINARY DRAFT

Table 1. Potential ARARs, Action-Specific

Bremerton Gas Works, Bremerton, WA

Remedial Activity	Act/Authority	Criteria/Issue	Citation	Brief Description	Applicability/Appropriateness
Dredging, Capping, and/or Discharge to Puget Sound	Surface Water Quality Standards	State Ambient Water Quality Criteria	Chapter 90.48 RCW; Chapter 173-201A WAC	See Table 4-1. Regulates activities which may result in discharges into navigable waters.	ARAR for control of short-term impacts to surface water from implementation of remedial actions that include dredging, capping, and discharge of treated water into Puget Sound. Incorporates the substantive provisions of relevant and appropriate requirements, where Washington State has adopted, and EPA has approved Water Quality Standards.
	Clean Water Act	Discharge of Materials into Puget Sound	33 USC 1344; 40 CFR Part 230	Regulates discharge of dredged and fill material into navigable waters of the United States.	ARAR for dredging and capping activities in Puget Sound.
	Fish and Wildlife Coordination Act	Discharge of Materials, Impoundment or Diversion of Waters in Puget Sound	16 USC 662 & 663; 40 CFR 6.302(g)	Requires federal agencies to consider effects on fish and wildlife from projects that may alter a body of water and mitigate or compensate for project-related losses, which includes discharges of pollutants to water bodies.	ARAR for in-water remedial actions or if treated water is discharged into Puget Sound.
	River and Harbors Act	Placement of Structures in Puget Sound	33 USC 401 et seq.; 33 CFR 320-330	Prohibits the unauthorized obstruction or alteration of any navigable water. Establishes requirements for structures or work in, above, or under navigable waters.	ARAR for remedial actions in Puget Sound.

Table 1

Page 3 of 5

January 30, 2014

PRELIMINARY DRAFT

Table 1. Potential ARARs, Action-Specific

Bremerton Gas Works, Bremerton, WA

Remedial Activity	Act/Authority	Criteria/Issue	Citation	Brief Description	Applicability/Appropriateness
Dredging, Capping, and/or Discharge to Puget Sound	Washington Hydraulics Code	Filling in Puget Sound	Chapter 75.20 & 77.55 RCW; Chapter 220-110 WAC	Establishes requirements for performing work that would use, divert, obstruct, or change the natural flow or bed of Puget Sound.	ARAR for shoreline excavation, dredging, and/or capping actions. Remedial actions must result in no net loss of aquatic habitat or function after sequential consideration of avoidance and mitigation.
Other Remedial Activities	Federal Clean Air Act; Washington Clean Air Act; Puget Sound Air Clean Air Agency (PSCAA) Regulations	Air Emission Discharges	42 USC §7401 et seq.; Chapter 70.94 RCW; Chapter 173-400 WAC; PSCAA Regulation III	Regulates air emission discharges.	ARAR for remedial activities that generate fugitive dust or other air emissions, including treatment operations.
	Historic Preservation Act; Washington Historical Activities Act	Alteration of Historic Properties	16 USC 470 et seq.; 36 CFR Part 800; Chapter 27 RCW	Requires the identification of historic properties potentially affected by remedial actions, and ways to avoid, minimize or mitigate such effects. Historic property is any district, site, building, structure, or object included in or eligible for the National Register of Historic Places, including artifacts, records, and material remains related to such a property.	ARAR if historic properties are affected by remedial activities. No historic properties have been identified at the Site to date, but could potentially be identified during remedial design.
	Archeological and Historic Preservation Act	Alteration of Historic and Archaeological Properties	16 USC 469a-1	Provides for the preservation of historical and archeological data that may be irreparably lost as a result of a federally-approved project and mandates only preservation of the data.	ARAR if historical and archeological resources may be irreparably lost by implementation of remedial activities.

Table 1

Page 4 of 5

January 30, 2014

PRELIMINARY DRAFT

Table 1. Potential ARARs, Action-Specific

Bremerton Gas Works, Bremerton, WA

Remedial Activity	Act/Authority	Criteria/Issue	Citation	Brief Description	Applicability/Appropriateness
Other Remedial Activities	Native American Graves Protection and Reparation Act	Alteration of American Graves	25 USC 3001-3013; 43 CFR Part 10	Requires Federal agencies and museums which have possession of or control over Native American cultural items (including human remains, associated and unassociated funerary items, sacred objects and objects of cultural patrimony) to compile an inventory of such items. Prescribes when such Federal agencies and museums must return Native American cultural items. "Museums" are defined as any institution or State or local government agency that receives Federal funds and has possession of, or control over, Native American cultural items.	ARAR if Native American cultural items are present in an excavation or dredging area.

Table 1

Page 5 of 5

January 30, 2014

PRELIMINARY DRAFT

Table 2. Potential ARARs, Location-Specific

Bremerton Gas Works, Bremerton, WA

Act/Authority	Criteria/Issue	Citation	Brief Description	Applicability/Appropriateness
Endangered Species Act	Effects on Endangered Species	16 USC 1531 et seq.; 50 CFR Part 17	Actions authorized, funded, or carried out by federal agencies may not jeopardize the continued existence of endangered or threatened species or adversely modify or destroy their critical habitats, or must take appropriate mitigation steps.	ARAR for remedial actions that may adversely impact endangered or threatened species or critical habitat present at the Site.
Safe Drinking Water Act	Underground Injection Control, Sole Source Aquifer program, and Wellhead Protection program	42 USC 300h – 300h-8, 40 CFR Part 300.400(g)(4), Chapter 173-160 WAC; Section 246-290-135 WAC	Resource planning programs designed to prevent contamination of underground sources of drinking water	The requirements of the City of Bremerton's wellhead protection program are TBC as a performance standard for groundwater that is a potential drinking water source (i.e., achieved as practicable) (Note that there are no water supply wells near the Site that are currently regulated by Bremerton's program).
Magnuson-Stevens Fishery Conservation and Management Act	Habitat Impacts	16 USC 1855(b), 50 CFR Part 600.920	Requires evaluation of impacts to Essential Fish Habitat (EFH) if activities may adversely affect EFH.	ARAR if the remedial action may adversely affect EFH.
Executive Order for Wetlands Protection	Wetlands Impacts	Executive Order 11990 (1977), 40 CFR Part 6.302(a), 40 CFR Part 6, App. A	Requires measures to avoid adversely impacting wetlands whenever possible, to minimize wetland destruction, and to preserve the value of wetlands.	ARAR for assessing impacts to wetlands, if any, from the remedial action and for developing appropriate compensatory mitigation.

Table 2

Page 1 of 1

January 30, 2014

PRELIMINARY DRAFT

Table 3. Potential ARARs, Chemical-Specific

Bremerton Gas Works, Bremerton, WA

Act/Authority	Criteria/Issue	Citation	Brief Description	Applicability/Appropriateness
Safe Drinking Water Act	Federal Primary Drinking Water Standards - Maximum Contaminant Levels (MCLs) and MCL Goals (MCLGs)	42 USC 300f, 40 CFR Part 141, Subpart O	Establishes drinking water standards for public water systems to protect human health. Includes standards for the following Site COCs: arsenic, benzene, and B(a)P. The NCP states that MCLs, not MCLGs, are ARARs for useable aquifers.	ARARs for groundwater that could potentially be used for drinking water, where the water will be provided directly to 25 or more people or will be supplied to 15 or more service connections.
Safe Drinking Water Act	Federal Secondary Drinking Water Standards - Secondary MCLs	42 USC 300f, 40 CFR Part 143	Establishes drinking water standards for public water systems to achieve the aesthetic qualities of drinking water (secondary MCLs).	To Be Considered (TBC) for groundwater that could potentially be a drinking water source (i.e., achieved as practicable).
Clean Water Act	Federal Ambient Water Quality Criteria	33 USC 1311 - 1317; 40 CFR Part 131	Under Clean Water Act Section 304(a), minimum criteria are developed for water quality programs established by states. Two kinds of water quality criteria are developed: one for protection of human health, and one for protection of aquatic life. The federal recommended water quality criteria are published on EPA's website: http://water.epa.gov/scitech/swguidance/standards/current/index.cfm	ARARs for surface water if more stringent than promulgated state criteria.
Surface Water Quality Standards	State Ambient Water Quality Criteria	Chapter 90.48 RCW; Chapter 173-201A WAC	Establishes Water Quality Standards for protection of human health and for protection of aquatic life (for both acute and chronic exposure durations).	ARARs for surface water where Washington State has adopted, and EPA has approved, Water Quality Standards.
Model Toxics Control Act	State Soil, Air, Groundwater, and Surface Water Cleanup Standards	Chapter 70.105D RCW; Chapter 173-340 WAC	Establishes cleanup levels for Site groundwater, surface water, soil, and air, including rules for evaluating cross-media protectiveness. MTCA cleanup levels cannot be set at concentrations below natural background.	Promulgated numeric cleanup levels are ARARs for soil, air, groundwater, and surface water. Equations to develop cleanup levels are not ARARs.

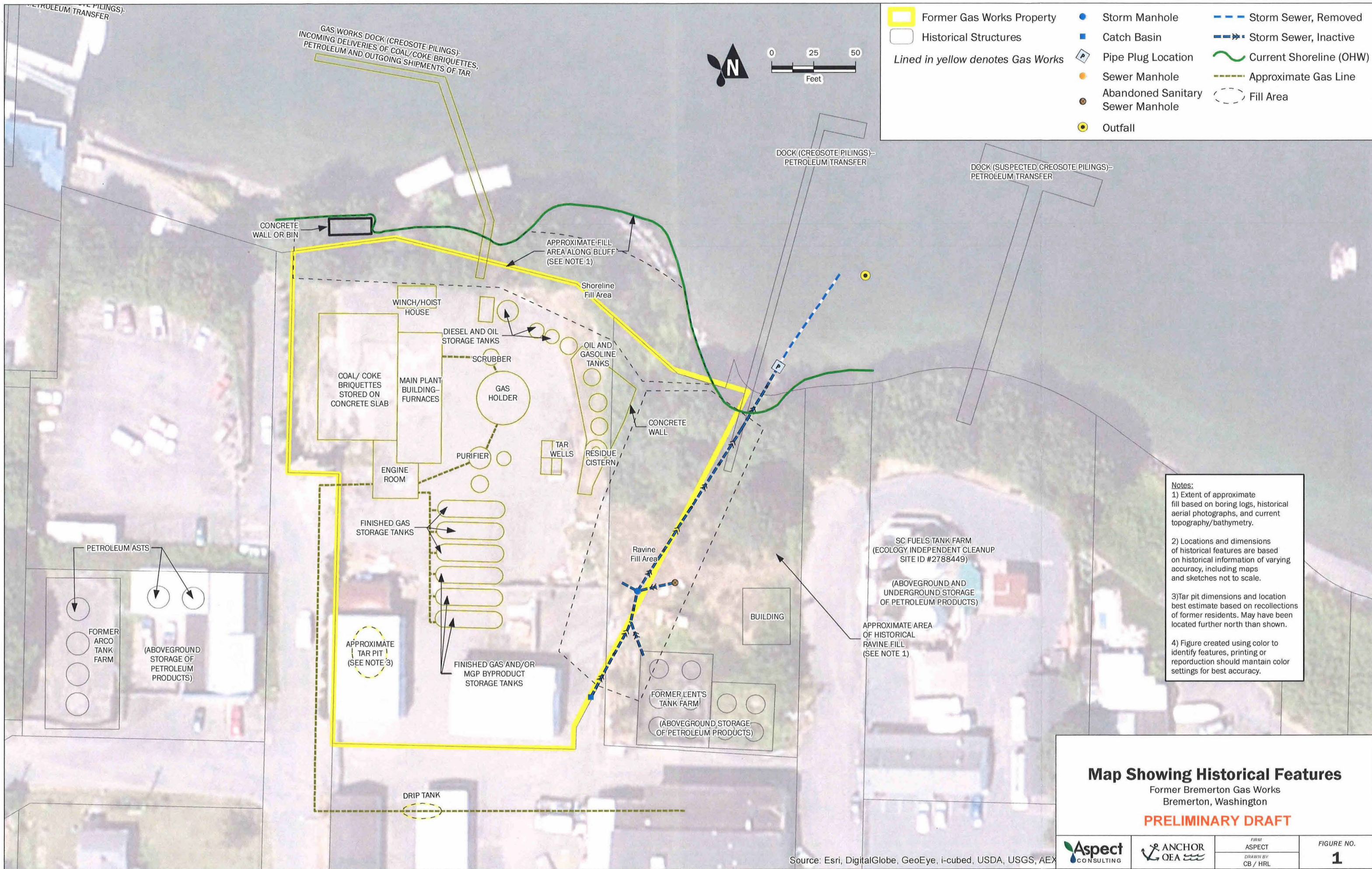
Table 3Page 1 of 2
January 30, 2014

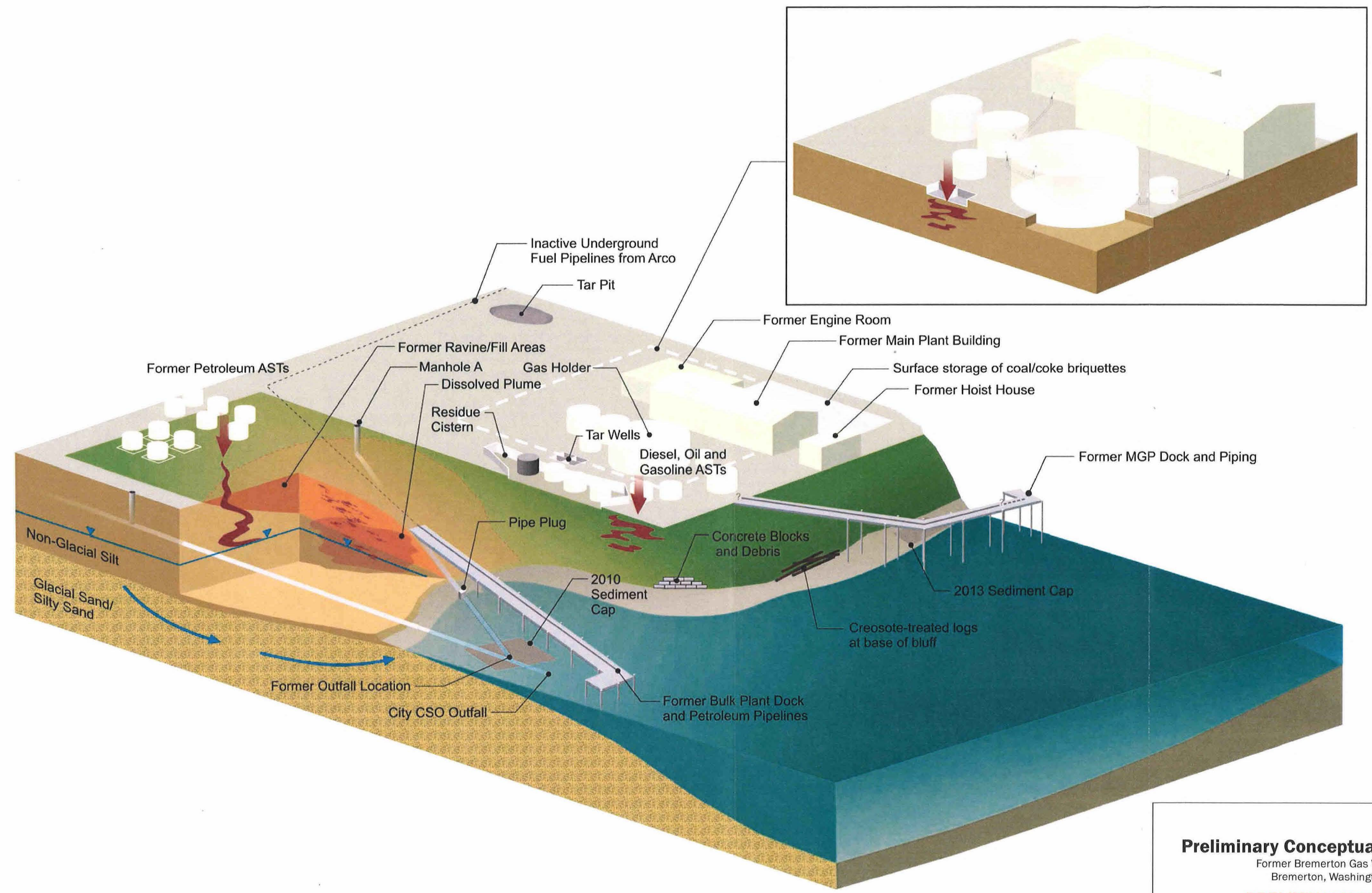
Table 3. Potential ARARs, Chemical-Specific

Bremerton Gas Works, Bremerton, WA

Act/Authority	Criteria/Issue	Citation	Brief Description	Applicability/Appropriateness
Sediment Management Standards	State Sediment Quality Criteria	Chapters 90.48 & 70.105D RCW; Chapter 173-204 WAC	Establishes both numerical and biological testing based standards for the protection of benthic invertebrates in marine sediments. The current rule also defines methods for establishing cleanup levels protective of human health, including protection from risks associated with seafood consumption, analytical considerations and natural and regional background contamination levels.	SMS cleanup levels will serve as ARARs for the development of sediment cleanup levels.

Table 3Page 2 of 2
January 30, 2014





Preliminary Conceptual Site Model

Former Bremerton Gas Works
Bremerton, Washington

PRELIMINARY DRAFT



FIRM
ASPECT
DRAWN BY
CB / HRL

FIGURE NO.
1

